

IN THE CLAIMS:

Following is a complete listing of all pending claims:

1. (Previously amended) In a conveyor of the type in which a length of roller-chain is entrained around first and second spaced apart sprocket assemblies to dispose a stretch of the roller-chain for load bearing on a guide plate interposed between the first and second sprocket assemblies and with the roller-chain being operable to transport a load in an axial direction defined by an axis oriented along the stretch of roller-chain, the improvement comprising:
a bed plate comprising a foundation plate and said guide plate, a top surface of said foundation plate receiving a bottom surface of said guide plate in a stacked arrangement effective to provide a normal support operable to resist bending deflection of said guide plate as a load is transported from a first end to a second end of said guide plate, said stacked arrangement further encompassing a slide-together fit structured to form an interference between structure associated with said foundation and structure associated with said guide plate, said interference being effective to resist separation of said guide plate away from said foundation plate in a direction normal to said top surface, wherein:
said foundation plate is adapted for attachment to structure of said conveyor; and
said guide plate is adapted for removable attachment to said foundation plate.
2. (Original) The improvement of claim 1, wherein:
said foundation plate comprises a metal; and
said guide plate comprises a plastic.

3. (Previously amended) The improvement of claim 1, wherein:
said foundation plate comprises a hold-down structure disposed on said top surface of said foundation plate; and
said guide plate comprises a socket disposed on said bottom surface of said guide plate, wherein:
a first portion of said socket is structured and arranged to receive said hold-down structure as said guide plate is displaced in a first direction that is substantially normal to said top surface; and
a second portion of said socket is structured and arranged to cause a structural interference with a portion of said hold-down structure subsequent to a displacement of said guide plate, in a second direction that is substantially transverse to said first direction, effective to accomplish said slide-together fit.
4. (Original) The improvement of claim 3, wherein:
said hold-down structure comprises a vertical member and a transverse member, said vertical member spacing said transverse member apart from said top surface;
said socket comprises a rim; and
in said installed configuration, said transverse member creates a structural interference with said rim to resist separation, in a direction normal to said top surface of said foundation plate, of said guide plate away from said foundation plate.
5. (Original) The improvement of claim 4, further comprising:
a plurality of hold-down structures distributed over an area of said foundation plate and a plurality of sockets arranged to engage with said plurality of hold-down structures.
6. (Original) The improvement of claim 4, wherein:
said vertical member of said hold-down structure is further arranged in harmony with structure of said socket whereby to resist motion in said axial direction of said guide plate with respect to said foundation plate beyond said installed configuration.

7. (Original) The improvement of claim 3, wherein:
said hold-down structure comprises an enlarged head carried on a substantially vertical stem.
8. (Original) The improvement of claim 7, wherein:
said stem is press-fit into receiving structure of said foundation plate.
9. (Original) The improvement of claim 7, wherein:
said stem is threaded into receiving structure of said foundation plate.
10. (Original) The improvement of claim 3, wherein:
said socket comprises a T-slot.
11. (Original) The improvement of claim 3, wherein:
said socket is disposed within a thickness of said guide plate to leave a top surface of said guide plate uninterrupted over a location of said socket.
12. (Original) The improvement of claim 3, wherein:
a hold-down system operable to resist motion, in a direction parallel to said top surface, of said guide plate relative to said foundation plate to retain said guide plate in said installed configuration, comprises:
a fastener disposed near an end of said guide plate for anchoring to structure associated with said foundation plate; and
a standoff disposed to receive said fastener through a thickness of said guide plate, said standoff being configured and arranged to resist over-tightening of said fastener.
13. (Original) The improvement of claim 1, wherein:
a lubricated sliding interface between said roller chain and said second material has a coefficient of friction lower than a corresponding coefficient of friction between steel-on-steel.

14. (Original) The improvement of claim 1, wherein:
a lubricated sliding interface between said roller chain and said second material has a coefficient of friction lower than a corresponding coefficient of friction between said roller chain and a hardened steel surface.
15. (Original) The improvement of claim 1, wherein:
a lubricated sliding interface between said roller chain and said second material has an effective dynamic coefficient of friction lower than about 0.08.
16. (Original) The improvement of claim 1, wherein:
said guide plate comprises a sheet of plastic material having mechanical wear properties at least substantially equivalent to Tyvar 88 plastic material.
17. (Previously amended) A method for installing a guide plate for a roller-chain onto a roller-chain type conveyor, comprising the steps of:
- a) disposing said guide plate at an elevated position with respect to, and substantially covering, a top surface of a foundation structure;
 - b) lowering said guide plate for stacked engagement, at a first position disposed substantially underneath said elevated position, to orient a bottom surface of said guide plate substantially in the plane of said top surface of said foundation structure to place hold-down structure carried by said foundation structure into reception in retention socket structure, said socket structure being disposed in a thickness, and opening to a bottom surface, of said guide plate;
 - c) transversely sliding said guide plate to a second position to engage a first portion of said holding structure with a second portion of said socket structure to form a structural interference between said first portion and said second portion operable to resist a displacement, in a direction normal to said top surface, of said guide plate away from said foundation structure; and
 - d) installing a stop element to resist motion of said guide plate from said second position.

18. (Previously amended) A bed plate for a roller-chain conveyor assembly, the bed plate comprising:

a foundation platform and a guide plate, a top surface of said foundation platform receiving a bottom surface of said guide plate in a stacked arrangement, wherein:

said foundation platform is adapted for attachment to structure of said conveyor to establish an alignment of said guide plate with respect to a portion of a roller chain of said conveyor assembly, said foundation platform further being structured to provide a distributed support for said bottom surface operable to resist bending deflection of said guide plate under a load transported along said conveyor assembly; and

said guide plate is adapted for removable attachment to said foundation platform by way of structure comprising a plug-then-slide arrangement configured to permit replacement of said guide plate without compromising said alignment, a top surface of said guide plate carrying a plurality of ridge elements, said ridge elements being configured for reception between side plates of a strand of said roller-chain whereby to guide said strand along an axial path, a top surface of said ridge elements being adapted to support a roller element of said roller-chain for rolling engagement thereon.

19. (Original) The bed plate of claim 18, further comprising:

first hold-down structure carried by said guide plate and second hold-down structure carried by said foundation platform, said first and second hold-down structure being mutually arranged to form an interlocking engagement effected by a displacement of said guide plate relative to said foundation platform, said engagement forming a structural interference operable to resist displacement of said guide plate in a direction normal to said top surface of said foundation platform, away from engagement with said foundation platform.

20. (Original) The bed plate of claim 19, further comprising:
a retaining pin installable to pierce structure associated with said guide plate for reception of a portion of said retaining pin in structure associated with said foundation platform, said retaining pin being adapted to resist an axial displacement of said guide plate from an installed axial position.
21. (Previously presented) The bed plate of claim 18, wherein:
said removable attachment is effected between a plurality of hold-down structures disposed in a plurality of rows and columns over an area of said foundation structure and a plurality of cooperatingly structured and arranged T-slot structures carried by said guide plate.
22. (Previously presented) The bed plate of claim 21, wherein:
one of said hold-down structures comprises a stem affixed at a first end to said foundation platform, a second of said stem carrying an enlarged head, said stem having a length between said first and second ends sized such that said enlarged head is spaced apart from said top surface; and
said enlarged head is configured in harmony with a socket portion of a said T-slot for insertion of said head, in a first direction, into reception in said socket, and subsequent transverse displacement of said head with respect to said socket, in a second direction effective to trap a shoulder portion of said T-slot between a portion of said head and said top surface.

23. (Previously presented) A method for installing a guide plate for a roller-chain onto a roller-chain conveyor of a saw mill without necessitating removal of the chain drive sprockets associated with that guide plate, comprising the steps of:

- a) disposing said guide plate at an elevated position with respect to, and substantially overlapping, a top surface of a foundation structure;
- b) lowering said guide plate into engagement with said foundation structure to place hold-down structure in reception within retention socket structure;
- c) transversely sliding said guide plate to form a structural interference operable to resist a displacement, in a direction normal to said top surface, of said guide plate away from said foundation structure; and
- d) installing a stop element to resist motion of said guide plate from an installed position.